# THE RECENT TREND OF MORTALITY IN ENGLAND AND WALES 

By W. S. HOCKING, O.B.E., F.I.A. of the Government Actuary's Department

In continuation of the tables given in F.I.A. Vol. Lxxv, pp. roi-106 central death-rates in age-groups for males and females separately in the year 1948, and the ratios of these death-rates to the corresponding rates for the years 1930-3r-32, are shown in Table I. Both the deaths and the populations from which the death-rates have been derived are limited to civilians, but the few civilian deaths due to war causes are included. The effect of the withdrawal of healthy lives to the Forces should be borne in mind in examining the rates for young adult ages.

In order that the trend of mortality rates since 1930-32 may be conveniently studied, the group death-rates and ratios to the 1930-32 standard since 1933 are shown in Tables 2 and 3 respectively, and the ratios to the $1930-32$ standard have been shown in graphical form on pp. 68-69. In these tables and graphs the age-groups have been reduced to six, viz., under age 1 (infants), I to 4 (young children), 5 to 14 (children of school age), 15 to 44 (younger adults), 45 to 64 (older adults) and 65 and over (elderly). Further, to eliminate the effect of the considerable changes in the age distribution of the population that have taken place since $1930-32$, the group death-rates and ratios have been standardized on the age distribution of England and Wales at the 193 I census.

Table 1. Death-rates for age-groups in the year 1948, and ratios to the rates for $1930-31-32$, in England and Wales

| Age-group | Death-rates |  | Ratios to 1930-32 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Males | Females | Males | Females |
| - 4 |  | $\cdot 00764$ | $\cdot 453$ | -453 |
| 5-9 | -00088 | -00062 | $\cdot 384$ | $\cdot 305$ |
| 10-14 | -00064 | -00055 | $\cdot 427$ | $\cdot 382$ |
| 15-19 | -00130 | . 00112 | $\cdot 510$ | $\cdot 487$ |
| 20-24 | . 00154 | .00156 | 470 | $\cdot 555$ |
| 25-29 | - 0174 | . 00174 | '527 | '569 |
| 30-34 | -00200 | ${ }^{-00181}$ | $\cdot 549$ | $\cdot 542$ |
| 35-39 | -00252 | -02208 | -528 | -528 |
| 40-44 | . 00379 | . 002883 | - 588 | . 578 |
| $45-49$ $50-54$ | .00658 | . 000427 | $\cdot 707$ $\cdot 783$ | . 683 |
| 50-54 | -.01024 | -00651 | ${ }^{\cdot 783}$ | . 687 |
| 60-64 | -02705 | -01520 | . 927 | 712 |
| 65-69 | -04000 | -02438 | . 859 | 722 |
| 70-74 | -06086 | . 04205 | . 818 | 757 |
| $75-79$ $80-84$ | -09346 | -97030 | ${ }^{7} 793$ | -755 |
| 85 and over | - 14249 | 11174 +18353 | 7793 7 745 | -751 |
| All ages: |  |  |  |  |
| Crude rates | . 01186 | . 01014 | 933 | '902 |
| Standardized* | -09915 | '00742 | 720 | 660 |

* Standardized on 1931 census age distribution.

Table 2. Standardized death-rates for age-groups in England and
Wales (standardized on 1931 census age distribution)

| Year | Age-group |  |  |  |  |  | Allages |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under I | I-4 | 5-14 | 15-44 | 45-64 | 65 and over |  |
|  | Males |  |  |  |  |  |  |
| 1930-32 | -07650 | -00755 | -00190 | .$^{\circ} 0385$ | -01653 | .$^{.08063}$ | -01271 |
| 1933 | -07354 | -00688 | '00189 | . 00390 | -01687 | -08075 | $\bigcirc 01272$ |
| 1934 | -07109 | -00697 | -00198 | -00356 | -01629 | -07687 | -01216 |
| 1935 | -06791 | '00535 | -00175 | $\cdot 0342$ | 01613 | -07755 | -01192 |
| 1936 | -07042 | -00580 | -00171 | ${ }^{-\infty} 332$ | -01658 | -08013 | -01220 |
| 1937 | -06845 | -00536 | -0161 | - 0338 | -01701 | -08102 | -01230 |
| 1938 | -06257 | . 00483 | - 0.16 I . | . 00315 | - 1572 | -07588 | $\cdot 01145$ |
| 1939 | -05874 | -00367 | -0137 | .00304 | -01628 | -07947 | -01158 |
| 1940 | -06631 | -00511 | - 0181 | -00447 | -01923 | -08729 | -01368 |
| 1941 | -07151 | - 0557 | - 01288 | -00479 | -1701 | -07774 | - $0 \times 285$ |
| 1942 | -06150 | -00372 | -00142 | -00393 | -01503 | -07089 | -01122 |
| 1943 | -05746 | -00348 | - 0136 | -00407 | -01542 | . 07146 | . 01132 |
| 1944 | - 05428 | -00298 | ${ }^{-00138}$ | -00409 | -01517 | -06891 | . 01102 |
| 1945 | -05194 | -00275 | -00119 | -00385 | -01477 | -06849 | -01071 |
| 1946 | -05559 | -00220 | -00092 | - 02254 | -01467 | -06713 | -00996 |
| 1947 | -04748 | '00236 | -00091 | -00238 | -01496 | - 07346 | -01025 |
| 1948 | -03843 | -00179 | -00076 | . 00205 | -01398 | . 06557 | -00915 |
|  |  |  | Fem | Les |  |  |  |
| 1930-32 | - 05705 | . 00677 | - 0174 | -00333 | - 01197 | . 6839 | -01124 |
| 1933 | -05587 | -00625 | -00176 | -00342 | -01219 | . 07011 | -01142 |
| 1934 | -05486 | -00633 | - 0190 | .00314 | -01143 | . 06469 | -01069 |
| 1935 | -05207 | -00490 | -00162 | -00301 | -01126 | .06467 | -01043 |
| 1936 | . 05286 | -0519 | . 00150 | .00289 | -01139 | -06682 | - 1058 |
| 1937 | -05235 | ${ }^{-00477}$ | -00145 | -0292 | . 01156 | -06785 | -01068 |
| 1938 | -04738 | -00424 | -60145 | -00264 | -01058 | -06137 | -00970 |
| 1939 | -04566 | ${ }^{\circ} \mathrm{CO} 322$ | - 0114 | -00260 | -01071 | -06547 | -00992 |
| 1940 | -05000 | - 0444 | -00156 | -00318 | -01208 | -07194 | -01121 |
| 1941 | $\cdot 05462$ | - 0494 | -00156 | -00302 | -01067 | -06323 | -01021 |
| 1942 | - 04752 | -00318 | -00111 | -00254 | -0095 | -05633 | . 00890 |
| 1943 | -04478 | -00317 | -00108 | -00256 | -00958 | -05847 | -00905 |
| 1944 | -04254 | -00254 | -00105 | -00247 | -00921 | -05462 | -00854 |
| 1945 | -04063 | .00235 | -0009 | - 00224 | -08899 | '05485 | -00834 |
| 1946 | -04229 | -00185 | -00071 | -02205 | . 00885 | -05582 | -00829 |
| 1947 | -03676 | -00194 | -00068 | -0203 | -00881 | -05782 | .00833 |
| 1948 | . 02955 | . 00155 | -00059 | - 0182 | -00821 | . 051110 | $\cdot 00742$ |

The Recent Trend of Mortality in England and Wales 67

Table 3. Ratios of standardized death-rates for age-groups in England and Wales to the rates for 1930-31-32 (standardized on 193I census age distribution)

| Year | Age-group |  |  |  |  |  | $\begin{aligned} & \text { All } \\ & \text { ages } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under I | 1-4 | 5-14 | 15-44 | 45-64 | 65 and over |  |
|  | Males |  |  |  |  |  |  |
| 1930-32 | 1.000 | 1. 00 | 1.000 | I.000 | 1.000 | 1.000 | 1.000 |
| 1933 | 961 | -91I | '995 | 1.013 | $1 \cdot 021$ | I'001 | $1 * 001$ |
| 1934 | -929 | -923 | 1.042 | '925 | $\cdot 985$ | *953 | '957 |
| 1935 | . 888 | $\cdot 709$ | -921 | . 888 | $\cdot 976$ | -962 | -938 |
| 1936 | -921 | -768 | -900 | . 862 | 1.003 | . 994 | .960 |
| 1937 | -895 | $\cdot 710$ | -847 | .878 | 1.029 | 1.005 | -968 |
| 1938 | .818 | -640 | -847 | 818 | '951 | '941 | '901 |
| 1939 | '768 | $\cdot 486$ | -721 | '790 | '985 | .986 | '911 |
| 1940 | -867 | $\cdot 677$ | -953 | 1'161 | 1.163 | $1 \cdot 083$ | 1.076 |
| 1941 | '930 | $\cdot 738$ | $\cdot 989$ | I 244 | 1.029 | $\cdot 964$ | 1.011 |
| 1942 | -804 | $\cdot 493$ | $\cdot 747$ | $1 \cdot 021$ | . 909 | . 879 | .883 |
| 1943 | '751 | -46I | $\cdot 716$ | 1.057 | -933 | .886 | -891 |
| 1944 | '710 | -395 | $\checkmark 726$ | 1.062 | -918 | .855 | .867 |
| 1945 | -679 | -364 | -626 | $1 \times 00$ | -894 | -849 | -843 |
| 1946 | ${ }^{7} 727$ | $\cdot 291$ | $\cdot 484$ | . 660 | -887 | -833 | .784 |
| 1947 | -621 | -313 | -479 | . 618 | -905 | '911 | -806 |
| 1948 | -502 | $\cdot 237$ | * 400 | -532 | -846 | .813 | 720 |
|  | Females |  |  |  |  |  |  |
| 1930-32 | 1.000 | 1.000 | 1.000 | $1 \cdot 000$ | 1'000 | 1.000 | 1*000 |
| 1933 | '979 | .923 | 1.011 | 1.027 | 1-018 | 1.025 | 1.016 |
| 1934 | $\cdot 962$ | -935 | 1 '092 | -943 | -955 | -946 | 951 |
| 1935 | -913 | -724 | .931 | +904 | +941 | $\cdot 946$ | '928 |
| 1936 | -927 | '767 | . 862 | . 868 | -952 | -977 | 941 |
| 1937 | -918 | . 705 | . 833 | . 877 | .966 | -992 | .950 |
| 1938 | -831 | +626 | .833 | 793 | .884 | -897 | -863 |
| 1939 | . 800 | -476 | -655 | 781 | -895 | '957 | -883 |
| 1940 | -876 | -656 | -897 | -955 | 1.009 | 1.052 | '997 |
| 1941 | -957 | '737 | -897 | -907 | '891 | '925 | '908 |
| 1942 | .833 | $\cdot 47{ }^{\circ}$ | -638 | 763 | -794 | . 824 | 792 |
| 1943 | $\cdot 785$ | -468 | .621 | 769 | . 800 | -855 | . 805 |
| 1944 | 746 | 375 | . 603 | -742 | '769 | 799 | 760 |
| 1945 | $\cdot 712$ | $\cdot 347$ | -517 | -673 | $\cdot 751$ | . 802 | 742 |
| 1946 | . 741 | $\cdot 273$ | -408 | . 616 | '748 | -816 | '738 |
| 1947 | +644 | $\cdot 287$ | -391 | . 610 | . 736 | $\cdot 845$ | .741 |
| 1948 | -518 | -229 | -339 | -547 | -686 | '747 | . 660 |

Ratios of group death-rates (standardized) to $1930-32$ rates


Ratios markedly affected by war conditions have been joined together by broken lines.

Ratios of group death-rates (standardized) to $1930-32$ rates


Ratios markedly affected by war conditions have been joined together by broken lines.

